Amendments to the Specification:

Page 7, final paragraph, replace with the following amended paragraph:

~~FIG. 7~~ FIGS. 7A and 7B ~~is a~~ are schematic views of versions of the concentrator employing filters of differing size;

Page 11, second paragraph, please replace with the following amended paragraph:

Rotor includes eight or some other plurality (e.g. 6, 10 or more) of axially longitudinal channels 160 formed about its circumferential surface 153. Each channel has a generally circular cross sectional shape and an entrance that is formed in the circumferential surface of the rotor. The interior of each channel includes a diameter that is larger than the entrance to the channel. This permits respective vane elements to be pivotally mounted within the channels, as is described more fully below. The channels 160 are typically arranged in adjoining pairs spaced evenly about the circumference of rotor ~~140~~ 120, although in alternative embodiments, uneven spacing arrangements may be utilized.

Page 12, first paragraph, please replace with the following amended paragraph:

Each vane element 170a-h is mounted to rotor ~~140~~ 120 by inserting its shaft 172 into a respective one of the longitudinal rotor channels 160. Shaft 172 may be inserted into the channel, for example, by removing the cover, side plate or side wall of the housing. The shaft is then slid into its respective channel in the rotor. When inserted in this manner, each vane has a width generally equal to the width or thickness of rotor ~~140~~ 120. Typically, shaft 172 has a diameter that is somewhat larger than the entrance of its associated rotor channel 160. As a result, the vane element is secured generally radially to the circumferential surface 153 of the rotor. At the same time, shaft 172 is

pivotable within that channel. Each vane is permitted to pivot or rock relative to rotor ~~140~~ 120, as indicated by double headed arrow 180 in FIG. 3.

Paragraph commencing on Page 12 and concluding on Page 13, please replace with the following amended paragraph:

Rotor ~~140~~ 120 has a substantially smooth circumferential surface 153. Multiple pairs of vanes 172 are pivotably mounted in circumferential surface 153. The proximately adjoining pairs of vanes (170a and b, 170c and d, 170e and f and 170g and h) include curved portions that diverge from one another outwardly from the circumferential surface 153. Conversely, each distally adjoining pair of vanes (170b and c, 170d and e, 170f and g, and 170h and a) converges as the vanes extend outwardly from the rotor. The vanes have a generally uniform thickness, although the outer end or tip of each vane may be somewhat thicker than the inner end or neck proximate the pivoting shaft. The vanes are curved so that they substantially flushly conform with the outer circumferential surface 153 of rotor ~~140~~ 120, at least as they travel through constricted region 126. This is best illustrated by vanes 170a and b traveling through constricted region 126 in FIG. 3.

Page 13, first paragraph, please replace with the following amended paragraph:

In operation, motor 24 drives rotor ~~140~~ 120 sequentially in alternating counterclockwise and clockwise directions, as indicated by double headed arrows 190. Centrifugal force causes vanes 170a-h to pivot outwardly to the greatest extent possible and engage the peripheral wall 116 of chamber 114. Each proximally adjoining, diverging pair of vanes 170a and b, 170c and d, 170e and f and 170g and h thereby defines a respective compartment 192a, 192b, 192c and 192d. Differently shaped

compartments 194a, 194b, 194c and 194d are formed between respective pairs of distally adjoining vane elements (170b and c, 170d and e, 170f and g, and 170h and a) that converge toward one another. More particularly, each compartment is defined by the proximally or distally adjoining pair of vane elements, the circumferential surface 153 of rotor ~~140~~ 120 and the inner circumferential chamber wall 116.

Paragraph commencing on Page 13 and concluding on Page 14, please replace with the following amended paragraph:

As rotor ~~140~~ 120 is initially driven in a clockwise direction, air is pulled through port 18 and drawing into chamber 114, via compartments 192a -192d and 194a-194d, as those compartments successively pass adjacent to port 16. For example, in FIG. 3, compartment 192b is shown passing port 18 in a clockwise direction. The pear-shaped compression chamber contributes greatly to the volume of air being pumped. Initially, as vane 170d moves from the constricted chamber region 126 to the wider main chamber region 125, the vane pivots outwardly from the rotor to engage the curved outer surface of the chamber within the main chamber region. At the same time, the other vane 170c in that pair remains within the constricted chamber region 126. Gradually, the volume of compartment 192b defined by vanes 170c and 170d expands and a vacuum is drawn within compartment 192b. This causes an increased volume of air to be pulled into the compartment through port 18 and pumped. This volume of air is then transmitted by the compartment 192 as the rotor travels in a clockwise direction through main chamber region 125. Eventually, as vanes 170c and 170d approach second port 16 the vanes are pivoted toward a closed condition. This constricts the space of compartment 192b and pressurizes the air within that compartment. This compressed air is then discharged

outwardly through port 16 at a desired pressure. From there, the compressed air is delivered in the direction of arrow 66 through line 36 (FIG. 1) to nitrogen filter 35. As each of the other compartments successively passes port 16 in a counterclockwise direction, that compartment likewise transmits air from port 16 through main chamber region 125 and back to constricted chamber region 126. As a result, the air is compressed and discharged through port ~~18~~ 16 (FIG. 3) as indicated by arrows 66.

Page 14, first paragraph, please replace with the following amended paragraph:

As previously indicated, each arcuate or curved portion 174 has a shape that generally conforms to a corresponding portion of the circumferential surface of rotor ~~140~~ 120. As a result, when each vane element is driven through constricted region 126, the arcuate portion of the vane is urged substantially flush against a circumferential surface of the rotor. An extremely compact compartment is formed. Little or no air leakage is exhibited. Improved pressurization and pumping efficiency are thereby accomplished.

Paragraph commencing on Page 14 and concluding on Page 15, please replace with the following amended paragraph:

At a predetermined time, motor 24 reverses operation and drives rotor ~~140~~ 120 in an opposite, clockwise direction. As each of the above-described compartments passes port 16, air from filter 35 is drawn into the compression chamber. More particularly, the air is pulled into successive compartments 192a-d and 194a-d and transmitted through those compartments through main chamber region 125. When each successive compartment reaches port 18, the air transmitted by the compartment is discharged through that port. Compressor 12 operates alternately in forward and reverse directions (counterclockwise and clockwise directions) in the foregoing fashion so that air is

alternatively pumped into and exhausted from compressor 12. At the same time, the other compressor 14 operates analogously in the opposite direction. Accordingly, as compressor 12 pumps air into nitrogen filter 42, compressor 14 exhausts air into its filter 37. When the operation reverses, the compressors pump in the opposite direction. This operation continues as required so that a balanced and consistent air flow is provided. The compressors reverse direction virtually instantaneously so that uninterrupted and balanced air flow is maintained.

Page 23, second paragraph, please replace with the following amended paragraph:

FIG. 5 depicts a compressor 12b that is modified slightly from the compressor shown in FIG. 4. In this version, a two-part housing is employed. More particularly, motor 24 is attached to compressor rotor ~~140~~ 120 through a drive shaft 26. The rotor is accommodated within a housing 212 that includes a base 213 and a cover 215. The rotor is disposed within the base and the cover is attached directly to an upper rim or edge of the base by bolts or other known means so that the rotor is enclosed within the housing. Once again, appropriate ports, e.g. port 216, are formed through the cover into the compression chamber. These ports and the remainder of the compressor are constructed and operate in a manner identical or at least analogously to the versions previously described.

Page 18, first paragraph, please replace with the following amended paragraph:

As previously indicated, motor 24 periodically and sequentially reverses direction. Such reversal may be initiated by various means. For example, a timer, not shown in FIG. 1, may cause motor 24 to reverse direction at predetermined time intervals (e.g. every 8-

10 seconds). Alternatively, filters 42 and 46 may be equipped with respective pressure sensing switches that are designed to detect predetermined pressure or vacuum levels. For example, the switch may comprise a pressure sensitive switch. When a predetermined pressure level is sensed in filter 42 (due to compressed air being introduced through that filter), a signal may be sent to motor 24, which signal causes the motor to reverse direction. In an analogous manner, the switch may comprise a vacuum sensitive switch that sends a signal to motor 24, causing the motor to reverse direction when a predetermined vacuum level is sensed in filter 46. In alternative embodiments, other pressure and/or vacuum sensing switches may be provided in one or both of the filters. In still other versions, a pressure sensitive switch may be contained within mixer 52. When a predetermined pressure level is measured in the mixer, a signal is sent ~~over lines 88 and 80~~ to motor 24, which causes the motor to reverse direction. Accordingly, the motor may be reversed either at predetermined time intervals or when predetermined pressure and/or vacuum levels are sensed within the respective filters and/or the mixer.

Page 25 first paragraph, please replace with the following amended paragraph:

In still another version of this invention, FIG. 8, a pair of compressors ~~12c~~ 12z and ~~14c~~ 14z may be formed at one end of the compressor assembly and may be driven in the same direction by a motor 124z. A similar pair of side by side compressors may also be mounted on the opposite side of motor 124z in an analogous manner, not shown. These compressors are driven in the reverse direction simultaneously in conjunction with compressors 12z and 14z. A fan 702z, as previously described, may also be utilized with each side by side bank of compressors.